**An Enhancement of Eigenface Algorithm Applied in  
 Missing People Tracer**

**ABSTRACT**

Eigenface recognition derives its name from the German prefix eigen, meaning own or individual. The Eigenface method of facial recognition is considered the first working facial recognition technology. Principal component analysis (PCA) is standard technique used in statistical pattern recognition and signal processing for data reduction and Feature extraction. PCA is also known as eigenface method. The Eigenface Algorithm is a practical approach for face recognition. Due to the simplicity of its algorithm, it is efficient in processing time and storage and the Eigenface recognition can be easily implemented in a system. Moreover, PCA reduces the dimension size of an image greatly in a short period of time. The accuracy of Eigenface is also satisfactory (over 90 %) with frontal faces. However, as there has a high correlation between the training data and the recognition data. The accuracy of Eigenface depends on many things. As it takes the pixel value as comparison for the projection, the accuracy would decrease with varying light intensity. Besides, scale and orientation of an image will affect the accuracy greatly.